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JOINT PROGRESS REPORT ON THE IMPLEMENTATION OF
THE INDUSTRIAL DEVELOPMENT DECADE FOR AFRICA*

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*Jointly prepared by UNIDO, ECA and OAU, but has not been formally edited.

JOINT PROGRESS REPORT ON THE IMPLEMENTATION OF
THE INDUSTRIAL DEVELOPMENT DECADE FOR AFRICA*

Introduction

1. The present report is submitted in compliance with General Assembly resolution 38/192, section II, paragraph 9 of which requests the Executive Director of the United Nations Industrial Development Organization (UNIDO), in co-operation with the Economic Commission for Africa (ECA), to submit, through the Industrial Development Board at its eighteenth session and the Economic and Social Council at its second regular 1984 session, a report to the General Assembly at its thirty-ninth session on the progress made in the implementation of the programme for the Industrial Development Decade for Africa. The report is also in compliance with resolution 1(vi), paragraph C.6 of the Sixth Conference of African Ministers of Industry, which requests the Bureau of the Conference to report to the seventh Conference of African Ministers of Industry on steps taken and the results achieved regarding the implementation of the Decade Programme.

I. INTER-SECRETARIAT CO-OPERATION

2. Co-operation in 1983 between the three lead agencies, the ECA, the Organization of African Unity (OAU) and UNIDO, was governed by the deliberations at a series of important meetings: (i) the seventh meeting of the Follow-up Committee on Industrialization in Africa held at Kigali (Rwanda) in March 1983; (ii) the meeting of the OAU and the secretariats of the United Nations system held at Addis Ababa (Ethiopia) in April 1983; (iii) two meetings of the Joint Committee of the OAU, ECA and UNIDO secretariat on the implementation of the programme for the Industrial Development Decade for Africa within the framework of the Lagos Plan of Action held at Addis Ababa (Ethiopia) in June and October 1983; and (iv) two subregional meetings on the promotion of intra-African industrial co-operation within the framework of the Industrial Development Decade for Africa held at Addis Ababa (Ethiopia) and at Abidjan (Ivory Coast) in November and December 1983, respectively.

3. At the seventh meeting of the Follow-up Committee on Industrialization in Africa, a careful review was made of the steps taken during the preparatory phase of the programme for the Decade. The majority of countries present at the meeting described how they had embarked on the readjustment of their national development plans to incorporate the concepts of the Decade and reported on specific activities directed towards the implementation of the programmes for the Decade at the national, subregional and regional levels. Several countries indicated that the necessary institutional machinery, national co-ordinating committees or operational focal points had been established or were about to be established, while others indicated that their establishment would be considered only after national policies had been reviewed and priorities identified. It was recognized that each country should focus its resources on priority and core industries. The Committee also recognized the benefits to be derived from co-operation between countries in the

*Jointly prepared by UNIDO, ECA and OAU.

establishment of core engineering and resource-based industries. In the subsequent months, the three secretariats finalized criteria for the selection of core industries at both the national and subregional level. These are to be issued in early 1984 as annexes to a special Decade publication containing guidelines for initiating priority actions at the national and subregional level (1982-1984) for the implementation of the Industrial Development Decade for Africa.

4. The Committee on Industrialization in Africa also reviewed modalities for the implementation of the programme for the Decade at the subregional and regional level. Discussion centred on Afro-Arab co-operation, on co-operation between the African countries and the developed countries, as well as on the operation of the African Industrial Development Fund. Progress was to be observed in respect of Afro-Arab co-operation and the need was recognized for African countries to define a common position prior to entering into negotiations with the developed countries. The Joint Committee of the OAU, ECA and UNIDO secretariats was called upon to assist the African countries in this latter endeavour. Similarly, the three secretariats were requested to contribute to the solution of the problems associated with the management of the African Industrial Development Fund.

5. At the meeting of the OAU and the secretariats of the United Nations system, emphasis was placed on the need for the United Nations organizations and agencies to reorient their programmes in accordance with the priorities and concepts of the programme for the Decade and to increase their assistance to the industrial sector. It was considered desirable that the assistance they provided should accord high priority to: (i) popularizing the Decade; (ii) adopting the concept of core industries as well as preparing and implementing core industrial projects; (iii) developing the manpower and technological capabilities required to implement the programme for the Decade and establish core industries; and (iv) mobilizing and optimizing both domestic and external sources of finance. At the next meeting of the OAU and the secretariats of the United Nations system to be held in Addis Ababa, 26-28 March 1984, discussion will focus on those priority areas as well as on the development of an appropriate system for the preparation of progress reports by the United Nations organizations on their contribution to the programme for the Decade.

6. At its meetings, the Joint Committee of the OAU, ECA and UNIDO secretariats discussed the action to be taken in the light of the decisions and recommendations adopted at the seventh meeting of the Follow-up Committee on Industrialization. In the light of the constraints upon the secretariats' activities imposed by the lack of funds that had originally been expected of UNDP, the three secretariats discussed ways and means of securing the all-important external resources needed to finance the establishment of core industries at the national and subregional level. In the course of the latter half of the year, they also prepared a draft document reflecting the common position of the African countries with respect to the Fourth General Conference of UNIDO (to be held - 2- 18 August 1984 covering all the items of the agenda which will be discussed at the Seventh Conference of African Ministers of Industry in March 1984. Based on consultations between the three secretariats, the background and issue papers to be presented to the Fourth General Conference of UNIDO in respect of the agenda item on the Decade were prepared and steps taken to ensure that the aims and objectives of the Decade were reflected in the documents prepared for the other agenda items. As in

previous years, intersecretariat co-operation in this and other matters, such as the preparation of industry and technology-related inputs into the joint ECA/OAU biennial report on the implementation of the Lagos Plan of Action, was facilitated by the continued appointment of a full-time UNIDO regional adviser to the OAU. With the appointment to Addis Ababa in October 1983 of a Senior Industrial Development Field Adviser (SIDFA) who also acts as the special representative of the Executive Director to ECA and the OAU, this intersecretariat co-operation will be strengthened still further.

7. The Joint Committee was deeply involved in the preparation and organization of the joint ECA/OAU/UNIDO subregional meetings on the promotion of intra-African industrial co-operation. The first two meetings of a series of four were held in November and December 1983 in respect of the Eastern and Southern and West African subregions. At those meetings, discussion centred on an integrated industrial promotion programme that had been prepared for each subregion. Comprising a series of core projects in priority subsectors and support projects supplementing the process of integration, these initial programmes had been drawn from two sources: national projects requiring multinational co-operation that had been submitted to UNIDO and ECA by countries in the subregion, and subregional industrial programmes developed within the framework of subregional intergovernmental organizations, the MULPOCs and the UNIDO investment promotion service. The projects had been identified on the basis of the criteria for selecting multinational/subregional industrial core projects referred to in paragraph 3 above. Following the deliberations at the two meetings, the initial programme for the Eastern and Southern African subregion consisted of 18 core projects and 9 support projects, and that for the West African subregion of 35 core projects and 17 support projects. Meetings on subregional co-operation in the Central and Northern African subregions are scheduled for early 1984, whereafter a composite document containing the initial programmes for all four subregions will be issued. At the subregional meetings discussion also focused on the implementation of the initial programme and the strategy to be adopted, underscoring the important role to be played by the lead countries designated for each project, intergovernmental organizations and financial institutions in the subregions. It should be pointed out that the elaboration of the integrated programmes is a continuous process: Governments and intergovernmental organizations in the subregion are thus urged to continue submitting project proposals for inclusion in subsequent stages of the programming exercise.

8. As in the previous year, it proved difficult to secure financial resources to assist African countries, as well as regional and subregional organizations, in carrying out the effective planning and, as necessary, implementation of programmes and projects during the current phase of the programme for the Decade. The current financial constraints experienced by UNDP made it essential to identify alternative sources. One such source was the allocation to UNIDO of US\$ 1 million from overall savings in the United Nations regular budget decided upon by the General Assembly for assistance to the African countries and intergovernmental organizations in the implementation of the programme for the Decade. As indicated in General Assembly resolution 38/192 priority is to be accorded to the formulation of industrial policies, strategies and plans, the development of core industries, industrial manpower, technological capabilities and institutional infrastructure, the development of energy technology and equipment, the promotion of intra-African industrial co-operation, the development of the least developed countries, the mobilization of financial resources and the popularization of the Decade. At the same time, UNIDO is investigating the possibility of launching an integrated support programme for the Decade funded from UNIDF and closely linked to ongoing activities in the field of industrial planning, feasibility studies and investment promotion.

II. ACTIVITIES IN SUPPORT OF THE PROGRAMME FOR THE DECADE

9. In addition to the activities described above, the secretariats continued to adjust their activities, as indicated in previous reports (ID/B/274 and ID/B/297) to the Industrial Development Board, in accordance with the priorities established for the Decade and reflecting the emphasis placed in General Assembly resolution 38/192 on selected strategic core industries. Samples are given below. Further details are contained in reports on the activities of ECA and UNIDO. ^{1/}

Major subsectoral programmes

10. Throughout the year, activities were directed towards identifying, preparing and implementing projects related to core industries. The concept of a core industry is basic to the programme for the Decade. It is used to describe those industries which contribute to the achievement of self-sufficiency in the priority sectors and the satisfaction of basic needs, as well as to the creation of a self-sustained and self-reliant industrial base.

11. A distinction is made between resource-based and engineering-based core industries. Resource-based industries are defined as those industries utilizing domestically available resources which constitute a nucleus providing basic inputs into industry and other priority sectors and/or producing goods and services to meet basic needs. Engineering-based core industries are defined as the minimum set of engineering industries which enable a country or group of countries to meet its most basic engineering requirements and make optimum use of available resources for the servicing of both industry and other priority sectors (agriculture, transport and communications and energy) in terms of equipment, spare parts and components.

12. Resource-based industries depend primarily on the exploitation and the complete vertical integration of the natural resources, including - energy of a country or subregion. Once established, they have significant up - and down-stream linkage effects not only in respect of other industries, but also in respect of other sectors of the economy. The engineering-based core industries provide inputs to resource-based industries and all economic activities. Whereas their development depends primarily on their own reproductive ability, it also depends, ultimately, on the products of the metallurgical and chemical (resource-based) industries for the production of tools, implements and capital goods. Some engineering-based core industries require mass production of parts and components. This usually exceeds the scope of a single country's capabilities and markets, and industries of this kind are well suited to subcontracting arrangements and hence to multi-national co-operation.

13. In the field of food processing, work continued on reducing the current major imports of wheat and increasing the use of locally grown sorghum, millet, manioc and other cereals. In the follow-up to the ECA/FAO regional workshop organized in Dakar (Senegal) in December 1982, it was established that by applying thermoplastic extrusion, a broad range of locally available raw materials ranging from broken rice to water yams and wheat bran could be used to produce such products as breakfast cereals and pre-gelatinized flour as well as milk and meat substitutes. UNIDO is currently investigating the viability of one such thermoplastic extrusion plant which will be used to demonstrate both the production process and product development. Work was completed by ECA in respect of the

^{1/} Economic Commission for Africa Annual Report 1982-1983 (E/1983/44 E/ECA/CM.9/30) 1 May 1982-2 May 1983.
Annual Report of the Executive Director, 1983 (ID/B/320).

technical compendium on the milling, baking and utilization of composite flours which is scheduled for publication in 1984. Aimed at millers and bakers in the region, it provides recipes and know-how, as well as details of technology, equipment and raw materials related to the production and utilization of composite flours.

14. The effective utilization of locally grown agricultural produce was also the keynote of other technical assistance projects, such as the rehabilitation, modernization and expansion of the food-processing industry in Angola, the rehabilitation of the food-processing industry in Mali, the rehabilitation of a fruit and vegetable processing factory in Zambia, and the processing of manioc within an agro-industrial complex established in Guinea. A long-term co-operation programme in the agro-industrial sector is also being evolved for selected least developed countries in the region (Benin, Ethiopia, Guinea and Sudan) within the context of the Joint UNIDO/Yugoslav Centre for Agro-industrial Development, while a study is being undertaken on the utilization of slaughter-house by-products in Ethiopia.

15. Among projects proposed for implementation in the near future is a large-scale sugar industry rehabilitation project in the Sudan with World Bank participation for which UNIDO is expected to deal with the training aspects. At the joint ECA/OAU/UNIDO subregional meetings on the promotion of intra-African industrial co-operation, ECA and UNIDO placed particular emphasis on projects that provided inputs to the increased production and processing of food and agricultural products.

16. Other activities in the agro-industrial subsector were also directed towards achieving the highest possible utilization of locally available resources. In the leather industry subsector, the processing of hides and skins, natural by-products of animal husbandry and meat-processing activities, received particular attention as reflected by the fact that the share of UNIDO leather industry projects in Africa (56 per cent) is the largest of all four regions. Plans are also being made for the establishment of regional leather technology centres as well as the provision of assistance to increase capacity utilization in such countries as the Sudan and Uganda and improve quality control operations in Kenya and the Sudan. The last project is a technical co-operation among developing countries (TCDC) training programme involving India and the Sudan which emanated from a Solidarity Meeting of Ministers of Industry for Co-operation in Industrial Development with the Democratic Republic of Sudan held two years earlier.

17. In the textile industry subsector, the technical assistance provided to both small- and large-scale industrial enterprises was primarily geared towards increasing the utilization of installed capacity, such as the assistance provided to the Tanzania National Textile Corporation (TEXCO). It is recognized that there is much scope for the African countries to balance textile consumption and demand with production capacity, and assistance will continue to be provided to the subsector, the development of which is constrained by such factors as the lack of foreign currency to purchase spare parts and auxiliaries and the irregularity of power supplies.

18. In the forest-based industries subsector, the activities of the FAO/ECA/UNIDO Forest Industries Advisory Group for Africa included the preparation of a feasibility study for a joint forest industry complex involving Egypt and the United Republic of Cameroon. Project identification studies were conducted in

countries of the North African subregion with a view to linking specific projects with those already identified in the eleven countries belonging to the African Timber Organization, to which project identification missions were also undertaken. The prospects of furniture and joinery products manufacture in the Eastern and Southern African subregion were also examined with a view to supplying countries in Northern Africa and the Gulf region. UNIDO continued to provide assistance in the construction of prototype wooden bridges as well as in the start-up of a modernized furniture plant in Guinea.

19. In the field of building materials and construction, ECA published guidelines for the production of essential building materials. These were based on criteria related to appropriate technology, self-sufficiency in basic raw materials, small and medium-sized plant operations and environmental safeguards. Appropriate materials for low-cost housing were discussed at a regional symposium held at Nairobi (Kenya) in November 1983 and organized by the International Council for Building Research and Documentation and the International Union of Building Materials Laboratories in co-operation with UNIDO, with a view to promoting the production, utilization, testing and standardization of appropriate materials for low-cost housing. In its technical assistance activities, UNIDO endeavoured to promote the integrated development of building materials based on local natural resources in harmony with traditional building practices and other local conditions. Given the similarity of conditions in several African countries, a regional network for the exchange of ideas and know-how would greatly facilitate the rapid development of the building materials industry: the realization of such an arrangement is a declared objective of joint ECA/UNIDO endeavours in this field.

20. Following a series of raw material and market surveys, pre-feasibility and feasibility studies, a mechanized brick plant in the Gambia went into operation in 1983. With the plant designed, built and equipped by the China National Complete Plant Export Corporation, the project, which was implemented within the context of TCDC, also includes a comprehensive training programme for plant operations, building contractors and bricklayers. In 1983, assistance to the cement industry in the Libyan Arab Jamahiriya was expanded: not less than some 250 specialists and technicians were assigned directly to three modern cement plants. The costs involved were borne fully by the industry and the expansion of the programme underscores the effectiveness of this kind of assistance.

21. As an adjunct to the technical assistance activities related to building materials, increased attention is being paid to the use of non-metallic minerals as a means of increasing agricultural yields. Such minerals as perlite and zeolite, swelling clay minerals such as betenite, and tuff can be applied to arid soils, thereby increasing the latter's water- and nutrient-retention properties and preventing possible wash-out of fertilizers. In addition to increasing the level of food production through improved yields per hectare, the application of such technology can also help to reduce fertilizer imports. It is felt that Africa could adopt a leading role in this field.

22. In the field of metallurgical industries, the bulk of UNIDO technical assistance was once again directed towards the foundry industry as reflected by the foundry projects under implementation in Angola, Mozambique, Niger, Somalia, Sudan and United Republic of Tanzania. Complementary to these activities was the organization of an expert group meeting on the manufacture of cast/forged parts held at Cairo (Egypt) in November 1983. With participants from eight African countries, the meeting discussed the utilization in foundries

of metal scrap which is available in significant quantities in many developing countries. Foundry industries were also covered in a workshop on managed maintenance in the metallurgical and foundry industries in Africa organized in spring 1983 within the framework of a UNIDO/UNDP assisted national project at the Egyptian Iron and Steel Company, Helwan (Egypt). Based on the outcome of that workshop, it was recommended that UNIDO introduce maintenance management programmes in the metallurgical and allied industries on a permanent basis, ultimately aiming at the establishment of a regional centre for that purpose.

23. While promoting the development of the iron and steel industry in Angola, Mozambique, Niger and United Republic of Tanzania, UNIDO also undertook a pre-investment evaluation of various feasibility studies related to the establishment of an aluminium smelter in Mozambique and studied the conditions for processing light non-ferrous metals in Zimbabwe. Plant tests are also being conducted with UNIDO assistance for the production of gold and silver from mine tailings in Mauritania. In connection with the feasibility study on a joint copper fabrication plant in Nigeria, based on refined copper supplied by Zambia, a production programme was proposed involving the production of 19 items, including copper wire, rods, magnetic wire, tubes and strips.

24. In addition to preparing project profiles in the metallurgical subsector for presentation to the joint ECA/OAU/UNIDO subregional meetings on intra-African industrial co-operation, ECA studied the possibilities and prospects for the integrated development of basic metal industries in West Africa. ECA also prepared a document on planning, manpower, technological options and approaches to the integrated development of the iron and steel industry in Eastern and Southern Africa. The second meeting of the Eastern and Southern African Steel Development Committee (ESASDEC) took place at Addis Ababa in October 1983, in which month preliminary agreement was also reached between the Government of Zaire and ECA on a multi-disciplinary programme for the rehabilitation of the Zairian iron and steel industry. A report was also completed on the prospects for African co-operation in the supply of coking coal to the iron and steel and related industries in the region, as was a study on the phased integrated development potential of the non-ferrous metal industry in the countries of Southern and Eastern Africa.

25. In the engineering subsector, assistance in the development of repair and maintenance facilities took on particular importance. The costs of breakdowns due to improper maintenance are often inordinate and ongoing projects in Guinea, Mali, Senegal, the Seychelles and Somalia play a crucial role as they contribute to higher productivity and help reduce capital costs otherwise incurred by the purchase of replacements. Other areas of focus are the design and manufacture of pumps, the fabrication of simple metal products and spare parts and the provision of industrial engineering services. A workshop on the installation, operation and maintenance of irrigation pumps was held at Dakar, (Senegal) in December 1983. Assistance in the manufacture of agricultural implements and equipment ranked high among the priorities as reflected by projects in Ethiopia, Togo, Uganda and Upper Volta. A study on the problems of industrial maintenance was undertaken in Madagascar and a national remedial strategy developed. While a second study on the maintenance of industrial equipment was carried out in Guinea Bissau.

26. The development of engineering industries in West Africa was treated in a study undertaken by ECA. On the basis of missions fielded in the previous year to Botswana, Ethiopia, Guinea, Kenya, Lesotho, Mauritius, Niger, Nigeria, Senegal, Sierra Leone, United Republic of Tanzania, Uganda, Zambia and Zimbabwe, project profiles were prepared and presented to the second meeting of the Intergovernmental Committee of Experts on Engineering Industries for Eastern and Southern Africa held at Addis Ababa in October 1983 and to the joint ECA/OAU/UNIDO subregional meetings on intra-African industrial co-operation. Furthermore, ECA fielded a mission to Benin to suggest ways and means of upgrading the OCBN railway workshop and the COBEMAG agricultural implements manufacturing unit. ECA also contributed to a meeting on agricultural capital goods organized by the Group of 77 at Cairo (Egypt) in May 1983, and throughout the year the regional commission provided substantive backstopping to the African Regional Centre for Engineering Design and Manufacturing (ARCEDEM) at Ibadan (Nigeria).

27. In the chemical industries subsector, the activities of UNIDO were directed towards the production of fertilizers and basic chemicals, petrochemicals, pesticides, pulp and paper, biomass derivatives and pharmaceuticals. Assistance in the development of the fertilizer industries in the member countries of the Common African and Mauritian Organization (OCAM), for example, should not only enhance the utilization of installed capacities but also contribute to the medium-term objectives of self-sufficiency in food, while the peat-based fertilizer programme in Burundi demonstrates the benefits to be derived from using local resources. In the field of pesticides, assistance was provided in setting up a multi-purpose pesticide production plant in Egypt.

28. In Mozambique, a salt-washing plant was installed and other projects related to the production of salt were undertaken in the Gambia, Nigeria and Sudan, while studies were initiated on the production of soda ash from brine in Ethiopia and the United Republic of Tanzania. In the pharmaceutical field, African countries featured prominently in UNIDO projects related to the utilization of medicinal and aromatic plants, the development of process technologies, the formulation and packaging of pharmaceuticals and the production of immunologicals and vaccines. A consultative meeting was held in Vienna in May 1983 in co-operation with the Science and Technology Research Commission of the OAU to discuss the utilization of medicinal and aromatic plants in the African region and recommendations were made on the further development of the pharmaceutical industry in Africa based on different levels of infrastructure.

29. In 1983, ECA completed a case study on the possible establishment of subregional industries producing ammonia and the selection of active ingredients for pesticides and pharmaceuticals in West Africa. In addition to a study on the development of the chemical industry in Eastern and Southern Africa, a broader study on the potential for the development of the chemical industry in the region as a whole was completed. The findings of those studies were reflected in part in the project profiles presented to the third meeting of the Intergovernmental Committee of Experts on Chemicals for Eastern and Southern Africa held at Addis Ababa in October 1983 and to the joint ECA/OAU/UNIDO subregional meetings on intra-African industrial co-operation.

30. In the small-scale industries sector, which plays a critical role in economic development by boosting local industry, generating employment, utilizing local resources and increasing national output, UNIDO assisted

small-scale industry development institutions in Ethiopia, Mali, Niger, Nigeria, Rwanda, Senegal, Togo and Upper Volta. These and other projects are predominantly related to rural development in core industrial subsectors such as food processing or forest products, with other projects related to handicrafts and cottage industries. The fact that several projects are entering their second phase reflects the importance that Governments attach to such activities.

31. In ECA, a review was made of problems confronting the development of small-scale industries together with an analysis of the structures of the requisite support institutions. A study was also carried out of linkages in the handicrafts sector and a directory was prepared of small-scale industrial project profiles. Designed to facilitate the creation of a network of small-scale and rural manufacturing industries, the directory provides details of the various areas, products, raw materials, machinery and equipment requirements and their sources. The value of such a directory was reaffirmed at the joint ECA/OAU/UNIDO subregional meetings on intra-African industrial co-operation held in 1983.

Major factor and related inputs

Natural resources and energy

32. ECA continued to provide assistance to the Eastern and Southern African Mineral Resources Development Centre based in Dolema (United Republic of Tanzania) and to the establishment of a similar centre for the countries of the Central African subregion. The regional commission also completed the study on the possibility of establishing African institutions to finance mineral development projects in the region, and published a document on the availability of phosphate rock, potash, iron ore and bauxite for industrial development in two African subregions.

33. ECA also issued reports to four groups of countries providing guidelines on improving the utilization of electrical energy and equipment, and a survey was conducted of the possibilities of manufacturing, on a multinational basis, electrical equipment suited to the needs of the African countries. This work was supplemented by an ECA publication on the possible local manufacture of energy equipment. The regional commission also provided the substantive servicing for a regional workshop on the role of coal in accelerated African economic growth held at Addis Ababa in July 1983. ECA also organized, in co-operation with FAO and the African Training and Research Centre for Women, a seminar on fuelwood and energy development for African women at Lusaka (Zambia) in April 1983.

34. As reported previously,^{2/} a workshop was held in January 1983 on industrial energy management and alternative sources of energy for participants from English-speaking African countries. UNIDO also participated in national workshops related to energy, such as that organized by the Government of Madagascar in October 1983. At the same time, it continued to provide assistance to the petroleum development centre at Luanda (Angola) which, in addition to meeting national objectives (primarily that by 1985 50 per cent of all personnel in the sector should be Angolan), will be developed into a

^{2/} ID/B/297, para. 34.

regional centre providing training to technical and managerial personnel from the SADC countries. UNIDO also continued its assistance to the Tanzania Petroleum Development Corporation (TPDC) which received a \$10 million loan from the OPEC fund for further prospecting activities.

35. Whereas a number of UNIDO energy-related activities were directed towards the development of traditional forms of energy such as the improvement of charcoal production in Somalia, numerous projects were concerned with the utilization of new and renewable sources of energy. A project in the Sudan was concerned with the gasification and pyrolysis of cotton stalks for the production of gaseous and solid fuels, while the new brick plant in the Gambia (see para. 20 above) is fired by ground-nut shells. In the Comoros, prototype solar distillation systems were introduced to demonstrate the feasibility of reducing the use of wood as fuel, and the establishment of a solar equipment manufacturing unit is being studied in Mali.

36. UNIDO is at present working on an energy for Africa programme. The limiting factor in the region is not the availability of energy, but the absence of a comprehensive programme embracing the whole region. Firstly, the region has an enormous hydro-electric potential, of which at present only 1.5 per cent is utilized. Second, the region disposes of a substantial biomass potential of more than one half ton of oil equivalent per capita.

37. OAU attaches particular importance to the establishment of an African energy commission as recommended in the Lagos Plan of Action and plans are being made for the preparation of an inventory of African energy resources and of African energy experts. It is also planned to undertake pre-feasibility studies on the possible establishment of an African energy development fund and convene a meeting of African governmental experts on the establishment of an African energy commission.

Institutional requirements

38. The important role played by technological institutions in the development of the region is underscored in the programme for the Decade. UNIDO thus continued its assistance to the Government of the Sudan in the establishment of a national centre for technology, elaborating an overall concept for the centre as well as the details of its staffing and organizational structure. UNIDO also organized a study tour for senior officials concerned with the project which gave them an opportunity to study similar initiatives in three developing countries.

39. UNIDO assistance to the Office for Technology Transfer in Nigeria was expanded and highest priority was given to staff training, with study tours to technology registries in selected developing countries being used as an effective means of familiarizing staff with the operation of such an office. UNIDO also assisted the secretariat of the Mano River Union in investigating the feasibility of an industrial and technological fair for the Union countries which, together with other institutional support projects, was discussed at the subregional meeting on intra-African industrial co-operation at Abidjan (Ivory Coast) in December 1983.

40. The consolidation and expansion of the UNIDO Technological Information Exchange System (TIES), with which several African countries are associated, were discussed at a meeting of heads of selected technology transfer registries held in Vienna in July 1983. At the annual meeting of the System held in October 1983, co-operative training programmes and regional activities were discussed, as well as the computerization of the member countries' information systems so as to facilitate the exchange of data.

41. With respect to the development and application of technology, steps were taken towards creating a regional network for small-scale hydropower plants, while technological co-operation with partners outside the region was enhanced by the negotiation of technology transfer agreements between enterprises in Sweden and Egypt and by the collaboration between food-processing enterprises in the Netherlands and the Sudan.

42. UNIDO continued to contribute to the organization of standardization, quality control and testing institutions. Assistance was provided to Angola, Ethiopia, Ivory Coast, Mauritius and Zimbabwe. Directed towards the strengthening or establishment of national standards bodies, the impact of such projects is well demonstrated by the successful establishment of the Mauritian Bureau of Standards.

Development of manpower capabilities and managerial skills

43. UNIDO continued to promote human resource development through three well-established channels: (i) fellowships and study tours; (ii) group training programmes; and (iii) technical assistance projects. Group training programmes were oriented in particular to the needs of the African region. Organized in co-operation with the Union of African Railways, training in the maintenance and repair of railway equipment was provided to engineers from French-speaking African countries at a course held in Belgium, Ivory Coast and Upper Volta in October/November 1983. A similar course will be held in 1984 for railway engineers from English-speaking African countries. African countries were heavily represented at in-plant group training programmes on diesel engine operation at Shanghai (China) and Prague (Czechoslovakia) in August/November 1983 and March/June 1983, respectively, while a training course on the repair and maintenance of small boats (viz. tugs and fishing boats) held at Antwerp (Belgium) in September/December 1983 proved most useful for participants from African countries with major fishing interests. The group training programme related to the processing of medicinal plants held at Bucharest (Romania) in May/July 1983 was of particular interest to African countries, as were the group training programme related to packaging organized for African specialists and held at Milan (Italy) in May/June 1983 and that related to design and pattern-making in the footwear and leather industry held at Jesi (Italy) in March/June 1983. Other important group training programmes included a seminar on the training of management trainers from public enterprises in French-speaking African countries held at Tunis (Tunisia) in January/February 1983 as well as a pilot group training programme for the Zimbabwe Iron and Steel Company organized at Linz (Austria) in September/October 1983.

44. The new approach to group training introduced in 1982 and involving a mobile team of experts, regional and national trainers and advisers was successfully re-applied in 1983. Under that programme, training was given to small-scale industrial entrepreneurs in Mali, Mauritania, Niger and Senegal. A group training programme on the management of industrial enterprises was held at Bissau (Guinea-Bissau) in March/April 1983 and, in co-operation with the Centre de recherches en gestion de la production of the University of Louvain (Belgium) a group training programme on the management of industrial goods manufacture was held at the Centre universitaire at Douala (United Republic of Cameroon). An interesting pilot project was also launched in the United Republic of Tanzania. Designed to promote the training of female entrepreneurs in managerial and technical matters relating to the promotion of small-scale industry, the project starts with the identification of training requirements, whereafter two seminars will be held concentrating on those requirements. Assistance was also provided to the African Association of Development Finance Institutions (AADFI) and, in co-operation with the Economic Development Institute of the World Bank, a survey was made of the training needs and capabilities of finance institutions in the region, whereafter a five-year training programme was developed.

45. Priority was also given to the "centres of excellence" programme which in the previous year had focused mainly upon English-speaking countries in Africa. In 1983, seven French-speaking countries and three Arab-speaking countries were included. Examples of the projects undertaken within the scope of this programme are the upgrading of the training centre at the Leather Research Institute in Nigeria and the strengthening of the Centre Ivoirien de Gestion des Entreprises (CIGE) in the Ivory Coast.

46. In addition to work on the joint ECA/UNIDO project on co-operation between African countries in industrial manpower training, the regional commission also organized a study tour of industrial production and related services, and together with UNIDO, ECA prepared a training project related to the preparation of agro-based industrial projects.

47. In order to combat shortcomings in the management of industrial enterprises and so contribute to improving the utilization of installed capacities, UNIDO provided assistance in the management of a number of established large-scale enterprises, covering such areas as general management, maintenance, accounting and financial management. In Somalia, for example, assistance was given in the development of a comprehensive management system for various public enterprises. In the Sudan, similar assistance was given to the specific sub-sectors, while in Malawi and Zambia, assistance was given to the Ministries of Industry in order to enhance their elaboration of industrial development programmes and the monitoring of factory operations. These activities were supplemented by industrial management seminars such as that held in Zambia in September 1983 which, it was recommended, should be repeated annually. It is also expected that following the meeting in Cairo, Egypt in October 1983, on the establishment of the Federation of African Chambers of Commerce and Industry, the creation of this multi-sectoral organization for businessmen will also contribute to the development of managerial capabilities in the region.

Industrial planning

48. As stated in the programme for the Decade,^{3/} the implementation of a well-defined self-reliant industrial development strategy requires the elaboration of a coherent industrial development plan. UNIDO contributed to this essential planning process by providing assistance to African countries and subregional organizations in the definition of their strategies and policies, the preparation of master, sectoral and regional plans and the overall management of the industrial development process. UNIDO not only contributed to the master plan for the industrialization of the United Republic of Cameroon, but it also co-operated with the Government of Mali in the identification and development of key resource-based industries, primarily agro-based. In Kenya, substantial contributions were made to the draft chapter on the manufacturing sector in the Fifth National Plan and subsectoral studies were completed in respect of the textile, electronics and metallurgical industries in that country. In Mauritius, UNIDO assisted in an assessment of the impact of promotion policies and incentives in the context of current structural adjustment programmes on the basis of which industrial development strategies will be revised and the growth of industrial production and exports promoted. The ongoing industrial survey in the Sudan will provide a basis for the planning, promotion and monitoring of industrial development in that country, while another UNIDO project in the Ivory Coast is designed to improve and strengthen the planning and overall management of the industrial development process. A similar project in Lesotho is awaiting approval. In Sierra Leone, the UNIDO projects related to the planning and promotion of industrial development have contributed not only to the formulation of a new industries development act, but also to surveys of existing industries and raw material endowments, and the identification of potential future development.

49. At the subregional level emphasis was placed on the essentiality of multinational co-operation as a means of ensuring the establishment of a sound industrial base and overcoming the constraints posed by limited markets. This was the main thrust of the subregional meetings described in paragraph 7, above. In this overall context an industrial survey of the Liptako-Gourma region revealed the region's industrial potential, particularly in the agro-industrial sector. The survey also revealed the long-term benefits to be derived from multinational co-operation in the utilization of local resources (hydro-electric energy and phosphates) to produce a commodity (fertilizers) for which there was a proven demand in the three countries and beyond. Furthermore, the electric energy generated could be used in the production of the iron and steel needed to extend the railway network in that region.

50. A seminar on the integration of women in the industrial planning process was held for the Portuguese-speaking countries in Africa in Luanda (Angola) in October 1983. Attended by more than 35 participants from Angola, Cape Verde, Guinea-Bissau, Mozambique and Sao Tome and Principe, the seminar was designed to increase the involvement of women in economic development planning in general and in industrial development planning in particular.

51. Both ECA and UNIDO provided assistance to the Economic Community of the Great Lakes Countries (CEPGL) in the field of industrial planning and the first draft of an industrial development plan for the countries of the Community was expected for the end of 1983. Other subregional organizations that received

^{3/} ID/287, page 36, para. 35.

UNIDO assistance included the Customs and Economic Union of Central Africa (UDEAC) and the West African Economic Community (CEAO). The first organization was assisted in the preparation of an industrial integration programme and in the establishment and management of an institute for multi-sectoral applied technology for planning and project evaluation, and the second in the formulation of an integrated programme involving the preparation of pre-feasibility studies related to the manufacture of iron and steel, fertilizers and hollow glass.

Mobilization of financial resources

52. In the course of identifying and generating industrial investment projects, the Investment Co-operative Programme of UNIDO undertook a series of missions to 39 developing countries of which 18 were in Africa. As a result of these missions, some 425 new industrial investment proposals were added to the UNIDO portfolio that now contains 820 active and pipeline project proposals, of which 289 relate to the African region. In the latest issue of the more detailed list of industrial investment project proposals which contained 272 projects, 90 related to Africa, while of the 29 developing countries in which industrial investment projects were promoted in 1983, 15 were African.

53. In a new drive to promote investment in specific industrial branches, the Investment Co-operative Programme of UNIDO established teams in selected developing countries to identify investment opportunities in one specific branch. The first branch so selected was the electronics industry and Senegal was among the countries covered. The area to be covered in 1984 is that of new and renewable sources of energy, while at a later date other areas will be the food processing, building materials, clothing and metalworking industries.

54. The country presentation meetings held during 1983 in Angola, Botswana, Egypt, Kenya, Lesotho, Malawi, Mauritius, Senegal, Swaziland, United Republic of Tanzania and Zambia not only provided information on the investment opportunities in those countries, but they also served as an effective prelude to the Regional Investment Promotion Meeting for Southern African Countries held at Lusaka, Zambia, in October 1983. Attended by participants from Angola, Botswana, Lesotho, Malawi, Mauritius, Swaziland, United Republic of Tanzania, Zambia and Zimbabwe, as well as other developing countries and 14 industrialized countries, the meeting provided a forum for the discussion of no less than 150 investment projects, at the end of which 32 letters of intent were signed.

55. As in previous years, officials were attached to the various UNIDO Investment Promotion Services to receive on-the-job training in the promotion of investment activities related to their own countries. The African countries so involved were: Angola, Congo, Guinea, Egypt, Ivory Coast, Rwanda and Senegal.

56. In the third edition of the Directory of Financial Resources for Industrial Projects in Developing Countries issued by the Investment Co-operative Programme particular emphasis was placed on ensuring wider coverage of African development financial institutions, especially in the sub-Saharan region. ECA also continued to contribute to investment promotion activities through the regular publication of the bulletin Investment Africa, and the regional commission undertook

a study on the options open to the management of the African Industrial Development Fund, a solution to which, it is hoped, will be found at the next Conference of African Ministers of Industry in March 1984.

Pre-investment activities

57. The pre-investment activities of UNIDO concentrated upon (i) the implementation of opportunity, pre-feasibility and feasibility studies; (ii) the establishment of national institutions to undertake pre-investment work; and (iii) the organization of seminars on industrial project preparation, evaluation and financing. The opening of a bottle and glass factory in Burundi marked the successful completion of extensive pre-investment work by UNIDO and work continued on the identification of energy-intensive industries that could be established in Zaire in the vicinity of the Inga dam so as to utilize the abundant supply of hydro-electric power. In connexion with assistance to the Nigeria-Niger Joint Commission for Co-operation, pre-feasibility studies were completed on the production of solar energy equipment and glass containers, as well as the establishment of village mills and pilot mills for millet and sorghum.

58. Other feasibility studies included a study on the modernization and expansion of the Sierra Leone National Workshop, a Government-owned metal-working facility in Freetown, and a study on the modernization and expansion of a cannery in Zambia. The first study was funded by means of a special-purpose contribution from the Federal Republic of Germany and the second study was financed by the Trade and Development Programme (TDP) of the United States of America within the context of a frame agreement between that country and UNIDO. Following on the industrial sector study on Madagascar ^{4/}, specific project proposals were put forward, some of which are currently under implementation.

59. In the Congo, Ethiopia, Madagascar and Zambia, work started on installing software for use with the Computer Model for Feasibility Analysis and Reporting (COMFAR), which facilitates the processing of pre-investment studies. The computer model was also used by other bodies such as the German Development Corporation and the Austrian Government to analyse feasibility studies related to projects in Kenya, Nigeria, Sierra Leone and Zambia. Given the growing acceptance of the COMFAR system, the software is currently being adapted so as to ensure its compatibility with different hardware systems.

60. Attention also focused on the establishment of industrial advisory units as a means of strengthening the capabilities of African countries in the pre-investment field and of contributing to the identification of suitable projects. Assistance was provided to the Centre d'Etudes et de Promotion Industrielles (CEPI) in Mali, in the course of which studies were prepared in respect of the textile industry and the production of salt, and to the Development Projects Study Agency in Ethiopia which was set up with the assistance of UNIDO.

^{4/} See ID/B/297, para. 58.

61. Upgrading national capabilities and promoting modern methods of industrial project identification, formulation and evaluation were facilitated by the organization of seminars. Following on an interregional seminar held in Warsaw (Poland) at the turn of the year 5/, national seminars held in Angola, Congo, Mali, Mozambique, Nigeria and Zaire were geared specifically to the requirements of government institutions preparing and evaluating industrial investment projects, and a six-week course in Guinea, organized under sub-contract to the International Development Association (IDA), was given for officials from the Ministry of Small- and Medium-Scale Enterprises.

Intra-African trade and co-operation

62. ECA continued its assistance to regional and subregional intergovernmental organizations, such as that provided to CEPGL in the preparation of protocols pertaining to industrial co-operation. Similar work was undertaken in respect of the recently established Economic Community of Central African States (ECCAS). In the course of preparations for the second meeting of the Committee on Industrial Co-operation in the Preferential Trade Area for Eastern and Southern African States, held in Harare, Zimbabwe, in November 1983, ECA prepared five studies on multinational co-operation with special reference to African multinational industrial enterprises. The first investigated the feasibility of creating multinational industrial corporations, and the second described the guidelines, procedures and modalities governing negotiations, contracts and investment promotion in respect of multinational industrial projects and enterprises. The third study was a case study on multinational corporate structures in the field of industry based on the experience of Kenya, while a fourth study was a case study on the problems, constraints and techniques of industrial contracting and related activities based on the experience of Nigeria. The fifth study discussed a strategy for collaboration with foreign investors.

63. In respect of trade, ECA issued a publication on the establishment of subregional distribution enterprises and an agricultural and non-agricultural commodity exchange. The regional commission also published a document on trade in manufactures based on the processing of locally available raw materials. A third publication was issued on intra-African trade in raw materials, the range extending from chrome, nickel, lead, rock salt, sisal, gypsum, and limestone to cobalt, tungsten (wolfram), vanadium and wine grape.

64. UNIDO also undertook research into an initial framework for a trilateral industrial complementation scheme. Involving OPEC, the more advanced developing countries and the least developed countries of Africa, the co-operative arrangement would attempt to bring together the resources specific to the three groups: energy, a growing manufacturing sector and minerals. Work on the initial framework will be supplemented by additional studies which may include trade promotion possibilities and industrial capacity utilization in Africa.

Industrial studies and research

65. Within its industrial studies and research programme, UNIDO prepared the annual statistical review of the world industrial situation. The current edition will include a special section on the industrial performance and present industrial situation of the least developed countries, data of particular relevance to the African region. UNIDO also provided data on the manufacturing sector and industrial performance in African countries for

inclusion in a study on the Lome convention being undertaken by a member of the European Parliament on behalf of the ACP-EEC Consultative Assembly. In co-operation with ECA and the Munich Centre for Advanced Training in Applied Statistics, UNIDO organized a seminar for industrial statistics in French-speaking Africa at Dakar (Senegal) in January/February 1983.

66. In continuation of its country studies programme, UNIDO undertook a study on resource-based industrial development in Guinea-Bissau, while the series of in-depth studies of the manufacturing sector of industrial countries will be extended to include studies on Kenya, Nigeria, Uganda, Zambia and Zimbabwe. In these latter studies, proposals will be made in respect of strategies and policies for structural change and adjustment. Industrial development reviews were also made of Central African Republic, Kenya, Malawi, Sudan, United Republic of Cameroon, United Republic of Tanzania and Zimbabwe as part of the preparation of a compendium of loose-leaf regularly updated country data sheets on developing countries.

67. The study on the Southern African Development Coordination Conference (SADCC) was completed; it highlighted the prospects for and constraints upon industrial development and co-operation in the region. Strategies and policies as well as institutional and other measures were suggested for strengthening industrial co-operation and intra-SADCC trade. The study was presented to the meetings of officials and of the Trade and Finance Ministers of the SADCC-countries held at Arusha (Tanzania) on 24-27 October 1983. A comprehensive study was also conducted on the prospects for national reconstruction and development in Namibia. Directly related to the Nationhood Programme, the study was undertaken at the request of the United Nations Institute for Namibia. It analyses the industrial and related sectors in Namibia as a basis for the future independent Government's determination of the country's industrial and technological policies.

68. Within the context of its sectoral studies and research subprogramme, UNIDO undertook studies in respect of three industrial branches of pertinence to Africa: the leather and leather products industry, the agricultural machinery and equipment industry, and the capital goods industry. In respect of the leather industry, a study was undertaken on the prospects for the production of tanning chemicals in developing countries with particular reference to Africa. In respect of the agricultural machinery and equipment industry, two studies were issued: one entitled "Agricultural machinery and rural equipment in Africa: a new approach to a growing crisis"^{6/} and the other "The development of African capacities for the design and manufacture of basic agricultural equipment". ^{7/} In respect of the capital goods industry, work is in progress on an analysis of the present situation and prospects of the industry in Africa.

69. In its research into the social aspects of industrialization, UNIDO considered the special features of socio-economic development in Africa, and in issues Nos. 8 and 9 of the journal Industry and Development in the course of preparation, items of specific interest to the Decade are presented. These issues range from power industries in the least developed countries, agricultural machinery in Kenya, the changing role of the manufacturing sector in Africa and industrial development in Africa. In the ninth edition of the Industrial Development Survey to be submitted to the Fourth General Conference

^{6/} UNIDO/IS.377.

^{7/} UNIDO/IS.379.

of UNIDO,^{8/} an analysis is made of the industrial situation in Africa. That analysis highlights the industrial performance of Africa with regard to other developing regions and examines some of the implications of the low rates of growth in the region. An investigation is also made of certain major problems including the role of cottage or small-scale industries and the difficulties encountered in developing successful export programmes for manufactures produced locally.

Popularization of the Decade

70. Every opportunity is seized to promote the programme for the Decade. At the First International Latin American/African Symposium held at Rio de Janeiro (Brazil) in August 1983, attention was drawn to the openings for co-operation between the two regions in the implementation of the programme for the Decade. At the regional SIDFA meeting held at Douala (United Republic of Cameroon) in December 1983 an item of the agenda was devoted to the Decade.

71. Contacts with the mass media were strengthened throughout the year with a view to launching a series on the Decade in established journals, and a major contribution was the Executive Director's participation in the televised 'grand débat' on industrialization in Africa that was telecast in the Ivory Coast during the subregional meeting on intra-African industrial co-operation at Abidjan in December 1983. Tapes of the debate were prepared for distribution to other broadcasting authorities and dubbed versions in English will also be produced.

72. The impact of the efforts to popularize the Decade can only be judged by results. In the reports received from countries, details are given of the manner in which national development plans have been readjusted or drawn up so as to reflect the aims and objectives of the Decade. It can be observed how countries are concentrating resources on priority industrial areas and core projects, promoting multinational co-operation and the greater utilization of domestic resources.

73. The establishment of the requisite institutional machinery, such as national co-ordinating committees and operational focal points, is another indicator of the extent to which the propagation of the programme has been successful, as is the participation of countries in such meetings as the subregional meetings on intra-African co-operation. Reports from the field and from governmental authorities bear out this growing awareness of the benefits to be derived from the Decade. At the same time, they serve to underscore the necessity of maintaining an effective popularization effort and a high degree of popular involvement in Decade-related activities.

Technical co-operation activities

74. Continued efforts were made by UNIDO to contribute to the achievement of the Decade objectives within the context of activities financed under the United Nations Industrial Development Fund (UNIDF), the Special Industrial Services (SIS) programme and the Regular Programme (RP). In respect of SIS, approvals for the calendar year 1983 totalled \$ for projects in Africa, representing .. per cent of the new SIS projects in that year. In respect of RP, approvals up to 31 December 1983 totalled \$.....

^{8/} ID/CQIF.5/2.

for projects in Africa, representing per cent of the total RP allocation. Under UNIDF, approvals totaled \$..... for projects, representing ... per cent of all UNIDF approvals.

75. Despite the inflow of funds from other sources, the indicative planning figure (IPF) funds remain the most important financial resource for the implementation of the programme for the Decade. Given the current financial constraints confronting UNDP, the management of those funds and their allocation to core projects and programmes that have a significant impact upon industrial development take on particular importance.'

Technical co-operation activities with other agencies and organizations

76. In addition to the ongoing activities of the joint FAO/ECA/UNIDO Forest Industries Advisory Group, technical co-operation activities were continued with: (i) FAO in connexion with assistance to the Nigeria-Niger Joint Commission for Co-operation; (ii) ILO in respect of the development of industrial co-operatives in the United Republic of Tanzania; and (iii) UNCTAD in connexion with institutional support to UDEAC and CEPGL. A joint UNEP/UNIDO/ILO project on the institution and co-ordination of national contingency plans in the West and Central African regions was started in 1983 and a regional workshop will be held in February 1984 at Dakar (Senegal) to review the findings of the project and propose means of implementing the recommendations contained in the industrial risk assessment. Ongoing projects include co-operation with various international executing agencies and financial institutions such as the United Nations Capital Development Fund, the Voluntary Fund for the United Nations Decade for Women, the United Nations Financing System for Science and Technology and the World Bank. These projects cover such areas as industrial promotion and transfer of technology, repair and maintenance of equipment, testing laboratories for metallurgical and non-metallurgical products, the manufacture of leather goods and the production of cement.

III. ACTION REQUIRED OF THE CONFERENCE OF MINISTERS OF INDUSTRY

77. The Conference of African Ministers of Industry may wish to take note of the present report and transmit it, together with its comments and recommendations, through the commission at its tenth regular session of 1984, to the OAU Council of Ministers for ultimate transmission to the Assembly of Heads of State and the United Nations General Assembly at its thirty-ninth session.